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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,560	12/08/2003	Gary W. Groves	1316N001633	4251

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EXAMINER

BURCH, MELODY M

ART UNIT PAPER NUMBER

3683

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,560	GROVES ET AL.	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The amendment filed 1/27/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Applicant has modified the demoninator within the square root of the formula defining the blowoff level Q in paragraph [0024]. Applicant states that the corrected formula is believed to be inherent. Examiner disagrees and concludes that the correction constitutes new matter since the corrected formula was not supported by the originally filed specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification fails to provide proper antecedent basis for the term "said rebound valve is a blowoff valve" in line 2 of claim 21.

Claim Objections

3. Claims 1-11, 13-21 are objected to because of the following informalities: the phrase "a piston slidably disposed within said pressure tube and connected to said piston" in line 5-6 of claim 1 should be reworded, the phrase "said valve assembly includes a second poppet valve is in" in line 2 of claim 7 should be reworded. The remaining claims are objected to due to their dependency from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 8. The phrase "said first and second poppet valves" in line 2-3 lacks proper antecedent basis. The claim particularly lacks proper antecedent basis for the second poppet valve.

Claim 11 is indefinite due to its dependency from claim 8.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6464048 to Groves et al. in view of US Patent 5586627 to Nezu et al.

Re: claims 1 and 21. Groves et al. show in figures 1, 2, and 5 an adjustable shock absorber comprising a pressure tube 16 defining a working chamber 24,26, a piston rod 14 extending through the pressure tube and into the working chamber, a piston 12 slidably disposed within the pressure tube and connected to the piston, the

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piston dividing the working chamber into an upper working chamber 24 and a lower working chamber 26, a valve assembly 22 separate from the piston in communication with the upper and lower working chambers, the valve assembly including a first variable orifice 94 in communication with the upper working chamber for controlling flow from the upper working chamber and a second variable orifice 84 in communication with the lower working chamber for controlling flow from the lower working chamber.

Groves et al. fail to include the limitation of the piston defining a plurality of compression fluid passages and a plurality of rebound fluid passages or the limitation of a compression valve attached to the piston allowing fluid flow from the lower working chamber to the upper working chamber when a first fluid pressure is exerted on the compression valve and rebound valve attached to the piston, the rebound valve allowing fluid flow from the upper working chamber to the lower working chamber when a second fluid pressure is exerted on the rebound valve, the second fluid pressure being greater than the first fluid pressure.

Nezu et al. teach in figure 3 the limitation of an adjustable shock absorber comprising a piston defining a compression fluid passage 61 and a rebound fluid passage 60.

In *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1955) the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the piston of Groves et al. to have

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included compression fluid passages and rebound fluid passages, as taught by Nezu et al., in order to provide a means of communication between the upper and lower chambers as taught in col. 8 lines 30-31 of Nezu et al.

Nezu et al. teach in figure 3 the limitation of a compression valve 63 attached to the piston allowing fluid flow from the lower working chamber to the upper working chamber when a first fluid pressure is exerted on the compression valve and rebound valve 62 attached to the piston, the rebound valve allowing fluid flow from the upper working chamber to the lower working chamber when a second fluid pressure is exerted on the rebound valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the piston of Groves et al. to have included a compression and rebound valve, as taught by Nezu et al., in order to provide a means of generating a damping force during instances when the pressure in the upper and lower chambers exceeds predetermined values as taught by Nezu et al. in col. 10 line 66- col. 11 line 4 and col. 11 line 44-49.

Groves et al., as modified, do not explicitly express that the second fluid pressure is greater than the first fluid pressure. Nezu et al. teach in col. 40 lines 41-44 that the shock absorbers can be arranged such that different (great and small) damping forces can be set at the extension side and the contraction side.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the first and second pressures of Groves et al., as modified, to have included the second pressure being greater than the first pressure

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such that greater damping forces exist at the extension side, in view of the teachings of Nezu et al., in order to provide a means of obtaining damping force properties suitable for the suspension control of a particular application.

Re: claim 2. Groves et al. show in figure 2 the limitation wherein the valve assembly includes a solenoid valve 48 having means for controlling the first variable orifice.

Re: claim 3. Groves et al. figure 2 show the limitation wherein the means for controlling the first variable orifice includes a spool valve 62.

Re: claim 4. Groves et al. show in figure 2 the limitation wherein the solenoid valve includes means 62 for controlling the second variable orifice.

Re: claim 5. Groves et al. show in figure 2 the adjustable shock absorber according to Claim 4 wherein, said means for controlling said first and second orifices include a spool valve 62.

Re: claim 6. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 1 wherein, said valve assembly includes a first poppet valve in communication with said upper working chamber to the same extent as Applicant's.

Re: claim 7. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 6 wherein, said valve assembly includes a second poppet valve is in communication with said lower working chamber to the same extent as Applicant's.

Re: claim 8. Groves et al. show in figures 2 and 5 the adjustable shock absorber according to Claim 6 wherein, said shock absorber includes a reserve tube 18 defining

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a reserve chamber 36, said first and second poppet valves being in communication with said reserve chamber to the same extent as Applicant's.

Re: claims 9 and 15. Groves et al. show in figure 2 the limitation wherein the valve assembly includes a solenoid valve 58,62,70 having means for controlling said first variable orifice.

Re: claims 10 and 16. Groves et al. show in figure 2 the limitation wherein the means for controlling the first variable orifice includes a spool valve 62.

Re: claims 11 and 17. Groves et al. show in figure 1 the absorber further comprising a base valve assembly 246 disposed between the lower working chamber and the reserve chamber as shown, the base valve assembly controlling fluid flow from the reserve chamber to the lower working chamber, the base valve assembly prohibiting all fluid flow from the lower working chamber to the reserve chamber as disclosed in col. 4 lines 60-63.

Re: claim 13. Groves et al. show in figures 1, 2, and 5 the adjustable shock absorber wherein said first poppet valve is in communication with said lower working chamber and said blowoff valve is in communication with said upper working chamber to the same extent as Applicant's.

Re: claim 14. Groves et al. show in figures 1, 2, and 3 the adjustable shock absorber wherein, said shock absorber includes a reserve tube 18 defining a reserve chamber 36, said first poppet valve being in communication with said reserve chamber to the same extent as Applicant's.

Re: claim 18. Groves et al. show the limitation wherein the first variable orifice is in communication with the lower working chamber as shown in figure 5.

Re: claim 19. Groves et al. show the limitation wherein the second variable orifice is in communication with the upper working chamber as shown in figure 5.

Re: claim 20. Groves et al. show the limitation wherein the shock absorber includes a reserve tube 18 defining a reserve chamber 36, the first and second variable orifices being in communication with the reserve chamber as shown in figures 1 and 5.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that there is nothing in Groves et al. which would suggest combining a reference disclosing compression and rebound valves in the piston with Groves et al. since all fluid flow other than the fluid flow through valve 22 of Groves et al. is defined as flowing through base valve 226. Examiner notes that both Nezu et al. and Groves et al. show adjustable shock absorbers having a valve assembly separate from the piston in communication with upper and lower working chambers. Nezu et al. teach two ways that fluid may flow from the upper chamber to the lower chamber and vice versa – one way is through the separate valve assembly 66,67 and the second way is through the piston via compression and rebound passages and valves. Fluid flow by the second means takes place when pressure in the chambers exceeds predetermined values. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the piston of Groves et al. to have been

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arranged similar to that of Nezu et al. in order to provide an alternate path of fluid flow between the chambers when the chamber pressures exceed predetermined values as taught by Nezu et al.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 15, 2005

Melody M. Bruch

5/15/05